

v6ops WG  
Internet-Draft  
Updates: [2464](#) (if approved)  
Intended status: Standards Track  
Expires: April 22, 2011

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October 19, 2010

Address Mapping of IPv6 multicast packets on Ethernet  
draft-gundavelli-v6ops-l2-unicast-06.txt

## Abstract

When transmitting an IPv6 packet with a multicast destination address, the IPv6 destination address is mapped to an Ethernet link-layer multicast address. This document clarifies that a mapping of an IPv6 packet with a multicast destination address may in some circumstances map to an Ethernet link-layer unicast address.

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## 1. Introduction

Transmission of IPv6 Packets over Ethernet [\[RFC2464\] section 7](#), specifies how an IPv6 packet with a multicast destination address is mapped into an Ethernet link-layer address. This document extends this mapping to explicitly allow for a mapping of an IPv6 packet with a multicast destination address into an Ethernet link-layer unicast address, when it is clear that only one address is relevant.

This mapping does not replace the mapping described in [\[RFC2464\] section 7](#). The determination of the unicast Ethernet link-layer address and the construction of the outgoing IPv6 packet are out of scope for this document.

## 2. Conventions

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC 2119](#) [[RFC2119](#)].

### [3.](#) Receiving IPv6 multicast packets

An IPv6 node receiving an IPv6 packet with a multicast destination address and an Ethernet link-layer unicast address **MUST NOT** drop the packet as a result of the use of this form of address mapping.

#### [4.](#) IANA Considerations

This specification does not require any IANA actions.

## [5.](#) Security Considerations

This document does not introduce any new security vulnerabilities.





The authors would like to acknowledge Bernard Aboba, Fred Baker, Wes Beebe, Ron Bonica, Olaf Bonness, Jean-Michel Combes, Ralph Droms, Alain Durand, Suresh Krishnan, Eric Levy-Abegnoli, Phil Roberts, Behcet Sarikaya, Hemant Singh, Mark Smith, Dave Thaler, Pascal Thubert, Stig Venaas and Eric Voit for their contributions and discussions on this topic.

## 7. Normative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.
- [RFC2464] Crawford, M., "Transmission of IPv6 Packets over Ethernet Networks", [RFC 2464](#), December 1998.

Internet-Draft

Unicast Transmission on Link-layer

October 2010

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